

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 2 (SOLOMONS ISLAND RD.) AND MITCHELLS CHANCE RD. IN ANNE ARUNDEL COUNTY. MD 2 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

CONTROLLER OPERATION

AN EIGHT-PHASE, FULLY ACTUATED NEMA CONTROLLER WITH THREE, 4-CHANNEL TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIERS, AND A COORDINATION MODULE HOUSED IN A BASE MOUNTED CABINET WILL BE INSTALLED AT THE INTERSECTION. THE CONTROLLER WILL OPERATE AS A SIX PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH EXCLUSIVE-PERMISSIVE LEFT TURN PHASES FOR NORTHBOUND AND SOUTHBOUND MD 2 AND A RIGHT TURN OVERLAP PHASE FOR MITCHELLS CHANCE ROAD.

PHASE CHART

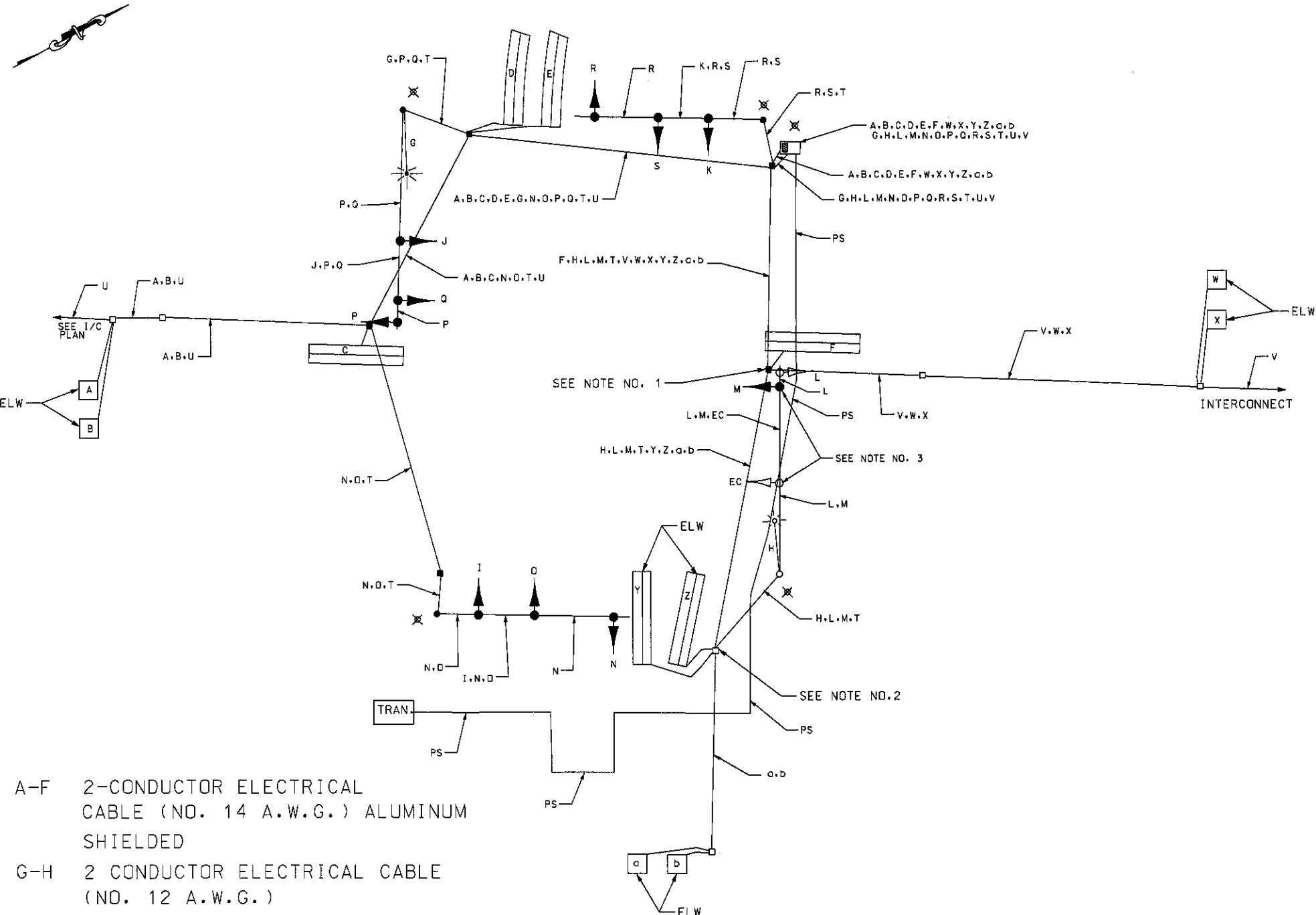
	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1 + 5	R	R	R	R	R	R	R	R	R	R	R	R
1 + 5 CHANGE	PHASE 3+7 MAY CHANGE TO PHASE 3+8, 4+7, OR 4+8											
PHASE 2 + 5	R	R	R	G	G	G	R	R	R	R	R	R
2 + 5 CHANGE	R	R	R	G	G	G	R	R	R	R	R	R
PHASE 1 + 6	G	G	G	R	R	R	R	R	R	R	R	R
1 + 6 CHANGE	G	G	G	R	R	R	R	R	R	R	R	R
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	R	R
2 + 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR
ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO QOTS FOR APPROVAL PRIOR TO INSTALLATION.

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2002	4 EA	TEST PIT EXCAVATION
5005	120 LF	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING
8011	29 EA	FURNISH AND INSTALL 12 IN. VEHICULAR SIGNAL HEAD SECTION
8013	1 EA	FURNISH AND INSTALL 15 FT. STREET LIGHTING ARM FOR SIGNAL POLE
8014	1 EA	FURNISH AND INSTALL 250 WATT HPSV LUMINAIRE
8019	9 EA	FURNISH AND INSTALL 8 IN. VEHICULAR SIGNAL HEAD SECTION
8020	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT FOR SIGNAL
8023	2 EA	FURNISH AND INSTALL 60 FT. MAST ARM AND POLE
8024	1 EA	FURNISH AND INSTALL 70 FT. MAST ARM AND POLE
8048	LS	REMOVE AND DISPOSE OF EXISTING EQUIPMENT
8051	50 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
8053	20 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
8057	17 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8059	45 LF	FURNISH AND INSTALL 4 IN. X 6 IN. WOOD SUPPORT
8060	540 LF	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER WIRE
8067	680 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - SLOTTED
8068	30 LF	FURNISH AND INSTALL 1 IN. LIQUID TIGHT, FLEXIBLE, NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
8070	50 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO.4 AWG
8072	5 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8076	1900 LF	FURNISH AND INSTALL 12 PAIR COMMUNICATION CABLE UNDERGROUND
8080	4 EA	FURNISH AND INSTALL GROUND ROD 3/4 IN. DIAMETER X 10 FT. LENGTH
8081	1470 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR ALUMINUM SHIELDED
8084	65 LF	FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR NO. 14 AWG
8085	1680 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR NO. 14 AWG
8086	190 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR NO. 12 AWG
8087	1680 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN 1/4 IN. FLEXIBLE TUBING (NO. 14 AWG)
8088	440 LF	FURNISH AND INSTALL SAW CUT FOR LOOP DETECTOR
8093	1 EA	FURNISH AND INSTALL CONTROLLER AND CABINET BASE MOUNT
---	3 EA	FURNISH AND INSTALL 4-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
---	2200 LF	REMOVE AND REINSTALL EXISTING WIRE
---	1 EA	RELOCATE EXISTING GROUND MOUNTED SIGN
---	1 EA	RELOCATE EXISTING OVERHEAD SIGN
---	1 EA	FURNISH AND INSTALL R3-5(R) SIGN (30" X 36") MAST ARM MOUNT
---	3 EA	FURNISH AND INSTALL R4-7 SIGN (24" X 30") GROUND MOUNT
---	2 EA	FURNISH AND INSTALL R10-12 SIGN (36" X 42") MAST ARM MOUNT
---	1 EA	FURNISH AND INSTALL SHIELD ASSEMBLY "SOUTH/MD 2/RT ARROW" (24" X 51") POLE MOUNT
---	1 EA	FURNISH AND INSTALL SHIELD ASSEMBLY "NORTH/MD 2/LT ARROW" (30" X 75") POLE MOUNT
---	1 EA	FURNISH AND INSTALL R3-5(L) SIGN (30" X 36") MAST ARM MOUNT
---	1 EA	FURNISH AND INSTALL R3-6(R) SIGN (30" X 36") MAST ARM MOUNT

WIRING DIAGRAM



A-F	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED		
G-H	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)		
I-K	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)		
L-S	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	W-B	EXISTING 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
T	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)	EC	EXISTING CABLE
U	12-PAIR COMMUNICATION CABLE, JELLY FILLED UNDERGROUND	LW	LOOP WIRE (NO. 14 A.W.G.)
V	EXISTING 12-PAIR COMMUNICATION CABLE, JELLY FILLED UNDERGROUND	ELW	EXISTING LOOP WIRE
		PS	PROPOSED SERVICE
		X	GROUND ROD

NOTES

1. REMOVE EXISTING 2-CONDUCTOR (A.S.) FOR S.B. MD 2 PASSAGE DETECTORS (W,X) FROM EXISTING BASE MOUNTED CONTROLLER AND PULL BACK TO THIS HANDHOLE. RE-INSTALL THROUGH PROPOSED CONDUIT TO PROPOSED BASE MOUNTED CONTROLLER.
2. REMOVE EXISTING 2-CONDUCTOR (A.S.) FOR W.B. MITCHELLS CHANCE ROAD DETECTORS (Y,Z,Q,D) FROM EXISTING BASE MOUNTED CONTROLLER AND PULL BACK TO THIS HANDHOLE. RE-INSTALL THROUGH PROPOSED CONDUIT TO PROPOSED BASE MOUNTED CONTROLLER.
3. RE-INSTALL EXISTING 5-CONDUCTOR CABLE TO PROPOSED SIGNAL HEAD.

EQUIPMENT LIST "A"

A. APPROVED SHA EQUIPMENT TO BE PURCHASED BY THE DEVELOPER AND INSTALLED BY THE CONTRACTOR. ALL EQUIPMENT IN THIS LIST SHALL HAVE CATALOG CUTS SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

ITEM NO.	QUANTITY	DESCRIPTION
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NONE

CONTACT PERSONS FOR DISTRICT 5 ARE AS FOLLOWS:

MR. LARRY ELLIOTT ASSISTANT DISTRICT ENGINEER - TRAFFIC (410) 841-1003	MR. CHARLES GEORGE ASSISTANT DISTRICT ENGINEER - MAINTENANCE (410) 841-1002
MR. JOHN MAYS ASSISTANT DISTRICT ENGINEER - UTILITIES (410) 841-1005	
CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY	
MR. RICHARD DAFF, SR. CHIEF, TRAFFIC OPERATIONS (410) 787-7630	MR. EUGENE BAILEY TEAM LEADER SIGN OPERATIONS (410) 787-7676
MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS (410) 787-7631	MS. DARLENE EIDE SUPPLY OFFICE SIGNAL SHOP WAREHOUSE (410) 787-7668
MR. ED RODENHIZER TEAM LEADER SIGNAL OPERATIONS (410) 787-7652	

EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY MARYLAND STATE HIGHWAY ADMINISTRATION

ITEM NO.	QUANTITY	DESCRIPTION
		CONTROLLER AND ALL AUXILLARY EQUIPMENT FROM THE CONTROLLER CABINET
		ALL SIGNAL EQUIPMENT (EXCEPT FOR THE ABOVE MENTIONED) TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

TRAFFIC CONCEPTS, INC.

325 Gambrills Road
Suite E
Gambrills, MD 21054
(410) 923-7101



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION

MD 2 (SOLOMONS ISLAND ROAD) AT MITCHELLS CHANCE ROAD

DRAWN BY: M.HOWELL	F.A.P. NO. _____	TS NO. 3225 B G1	SHEET NO. 3 OF 3
CHECKED BY: J.ZAYDEL	S.H.A. NO. _____	T.I.M.S. NO. E401	
SCALE: 1" = 20'	COUNTY: ANNE ARUNDEL	LOG MILE: _____	